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› [Powermatic](#) /

› [Powermatic Single-End Dovetailer DT45 User Manual](#)

## Powermatic DT45

# Powermatic Single-End Dovetailer DT45 User Manual

Model: DT45

## PRODUCT OVERVIEW

The Powermatic Single-End Dovetailer, Model DT45, is a robust machine designed for cutting precise dovetails in various woodworking applications, including drawers and furniture components. It features a router spindle for adjustable dovetail height and can produce four distinct dovetail types with varying pitches. Manual eccentric clamping ensures secure workpiece handling.



Figure 1: The Powermatic Single-End Dovetailer DT45, a machine designed for precise dovetail joinery.

## SAFETY INSTRUCTIONS

Always read and understand all safety warnings and instructions before operating the machine. Failure to follow the warnings and instructions may result in electric shock, fire, and/or serious injury.

- Wear appropriate personal protective equipment (PPE), including safety glasses, hearing protection, and dust mask.
- Ensure the machine is properly grounded before use.
- Keep hands and fingers clear of the cutting area during operation.
- Disconnect power before performing any maintenance or adjustments.
- Maintain a clean and well-lit work area.

## SETUP AND ASSEMBLY

The Powermatic DT45 Dovetailer requires proper setup to ensure safe and efficient operation. Refer to the included assembly diagrams for detailed steps.

### Unpacking and Inspection

Carefully remove all components from the packaging. Inspect for any shipping damage. Report any damage immediately to the carrier and your dealer.

### Placement

Place the machine on a stable, level surface capable of supporting its weight (approximately 345 pounds). Ensure adequate clearance around the machine for operation and maintenance.

### Electrical Connection

The machine operates on 115/230V, 1Ph power. Ensure the electrical supply matches the machine's requirements. Connect the machine to a dedicated, grounded circuit.

### Included Components

Verify all included components are present:

- Dovetail Machine
- Clamping Handles (with hex nuts) (x2)
- Set of Open-Ended Wrenches (8-10, 11-13, 12-14 and 17-19mm)
- Set of Hex Wrenches (1.5 to 6mm)
- Sample Dovetailed Board (x2)

## OPERATING INSTRUCTIONS

The Powermatic DT45 is designed for efficient dovetail cutting. Familiarize yourself with the controls and features before operation.

### Basic Operation

The machine features a magnetic starter for safe power control. Press the green "START" button to power on and the red "STOP" button to power off.

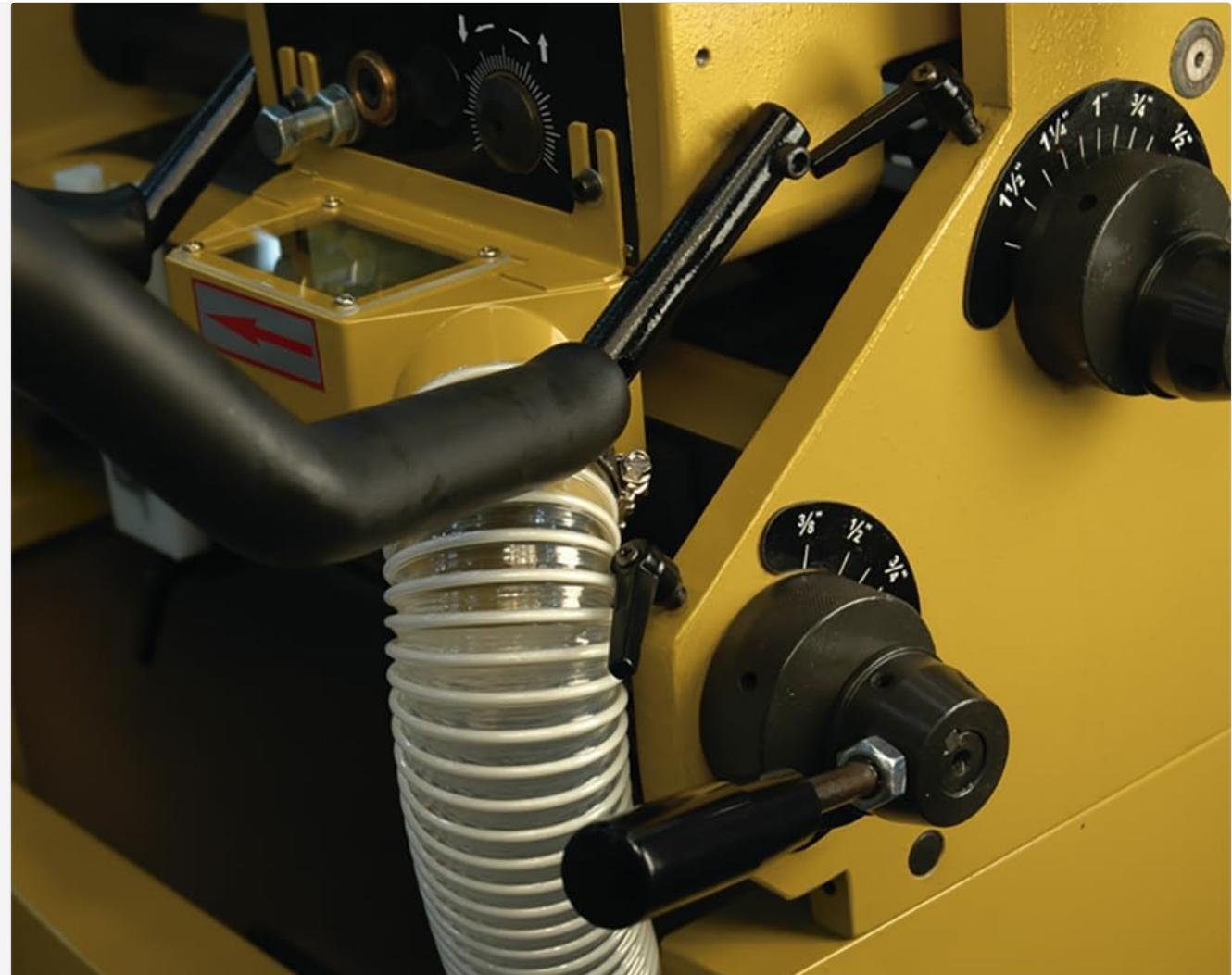


# MAGNETIC STARTER

Figure 2: Magnetic starter for controlling machine power.

## Adjusting Cutter Height

The cutter height can be adjusted from 3/16" to 3/4" to accommodate various board thicknesses and desired cutting depths. Use the adjustment mechanism to set the precise height.

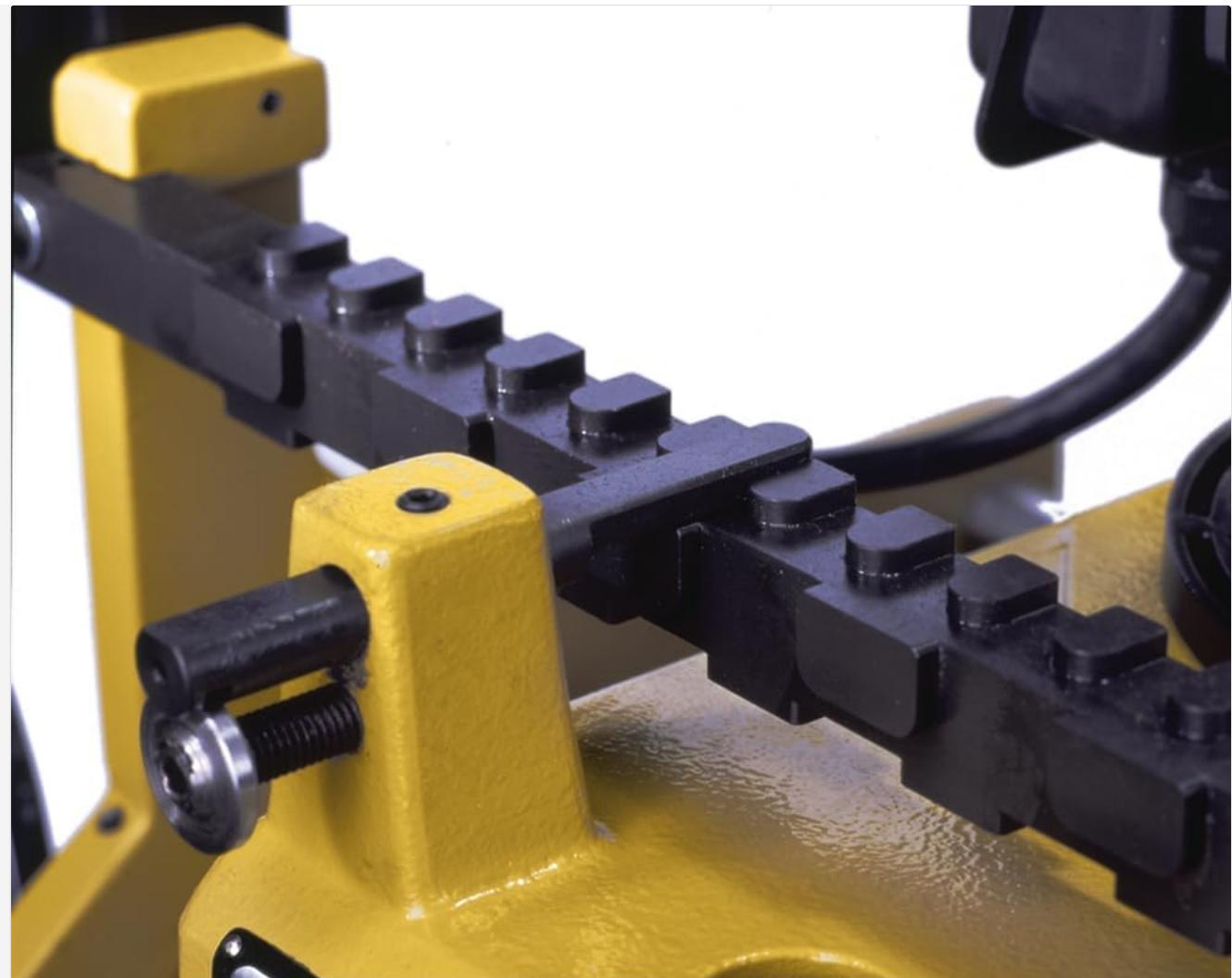


## **CUTTER HEIGHT OF 3/16" TO 3/4"**

Figure 3: Adjustment for cutter height, ranging from 3/16" to 3/4".

### **Utilizing Dovetail Center Lines**

The machine offers four dovetail center lines at 1", 1-1/2", 2", and 2-1/2". These allow for creating custom dovetail appearances and spacing.



## ***FOUR DOVETAIL CENTER LINES: 1", 1-1/2", 2", 2-1/2"***

Figure 4: Dovetail center lines for varied joint spacing.

### **Eccentric Spindle Collet**

The eccentric spindle collet is designed to accommodate resharpened cutters, ensuring continued precision and performance.



# ECCENTRIC SPINDLE COLLET

Figure 5: Eccentric spindle collet for cutter adjustments.

## Workpiece Clamping

Locking and unlocking of workpieces is performed manually using an eccentric clamp, providing secure hold during the cutting process.



### FOUR CENTERLINES

Four separate dovetail centerlines 1", 1-1/2", 2", and 2-1/2" create a custom appearance.



### ECCENTRIC SPINDLE COLLET

Eccentric spindle collet for resharpened cutters.



### MANUAL ECCENTRIC CLAMPING COLLET

Manual eccentric clamping will keep boards firm.

Figure 6: Visual representation of key features including clamping mechanism.

## MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Powermatic DT45 Dovetailer.

- Cleaning:** Regularly clean the machine, especially the cutting area and dust collection system, to prevent buildup of wood chips and dust. The built-in dust collection system is highly effective.
- Lubrication:** Apply lubricant to moving parts as specified in the detailed maintenance schedule (refer to full manual for specifics).
- Cutter Sharpening/Replacement:** Ensure cutters are sharp for clean cuts. Replace worn or damaged cutters promptly.
- Bearing Inspection:** Precision linear carriage bearings are sealed to eliminate dust buildup, but periodic inspection for smooth operation is recommended.

## TROUBLESHOOTING

This section provides solutions to common issues you might encounter with your DT45 Dovetailer.

Problem	Possible Cause	Solution
Machine does not start	No power supply; Emergency stop engaged; Motor overload.	Check power connection; Reset emergency stop; Allow motor to cool and reset breaker.
Poor dovetail quality	Dull cutter; Incorrect cutter height; Loose workpiece.	Sharpen or replace cutter; Adjust cutter height; Ensure workpiece is securely clamped.
Excessive vibration	Unbalanced cutter; Loose components; Machine not level.	Inspect and balance cutter; Tighten all fasteners; Level the machine.

## SPECIFICATIONS

Attribute	Value
Brand	Powermatic
Model Number	DT45
Product Dimensions	33" L x 33" W x 61" H
Voltage	115 Volts
Power Source	Corded Electric
AC Adapter Current	25 Amps
Item Weight	345 Pounds
Material	Steel
Horsepower	1
Cutter Height Range	3/16" to 3/4"
Dovetail Center Lines	1", 1-1/2", 2", 2-1/2"

Attribute	Value
Construction	Cast iron and steel
Bearings	Precision linear carriage bearings, sealed



## CAST IRON AND STEEL CONSTRUCTION

Figure 7: The robust cast iron and steel construction of the DT45.

### WARRANTY INFORMATION

The Powermatic Single-End Dovetailer DT45 comes with a **5-year warranty**. This warranty covers defects in materials and workmanship under normal use and service. Please retain your proof of purchase for warranty claims.



Figure 8: The Powermatic 5-Year Warranty symbol.

## CUSTOMER SUPPORT

For technical assistance, parts, or service, please contact Powermatic customer support. Visit the official Powermatic website for the most current contact information and additional resources.

**Online Resources:** [Powermatic Store on Amazon](#)

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